



Department of Energy

Golden Field Office
1617 Cole Boulevard
Golden, Colorado 80401-3393

DOE/EA-1861

FINDING OF NO SIGNIFICANT IMPACT

FRITO-LAY BIOMASS BOILER PROJECT BELOIT, WISCONSIN

AGENCY: U.S. Department of Energy, Golden Field Office

ACTION: Finding of No Significant Impact (FONSI)

SUMMARY: The U.S. Department of Energy (DOE) provided Federal funding appropriated under the American Recovery and Reinvestment Act of 2009 to the Wisconsin Office of Energy Independence (OEI) under the State Energy Program (SEP). The Wisconsin OEI proposes to provide up to \$5.5 million of SEP funds to Frito-Lay for construction of a biomass boiler. Under the Proposed Action, Frito Lay would use the Federal funding to construct a boilerhouse and support the purchase of equipment for a dry biomass-fired steam plant, which would consist of a fuel feed system, biomass fuel gasifier, combustor, electrostatic precipitator, and heat recovery system.

Before the Wisconsin OEI can award a subgrant to Frito-Lay, DOE must examine the potential environmental impacts of its Proposed Action in compliance with the National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. 4321 *et seq.*). DOE prepared an Environmental Assessment (EA) to comply with NEPA.

Based on the information and analyses in the Final EA, DOE has determined that its Proposed Action does not constitute a major Federal action that would significantly affect the quality of the human or natural environment within the meaning of NEPA. Therefore, an environmental impact statement is not required and DOE is issuing this FONSI.

All discussion, analysis, and findings related to the potential impacts of construction and operation of the Frito-Lay biomass project, including best management practices to which Frito-Lay has committed, are contained in the *Final Environmental Assessment for the Frito-Lay Biomass Boiler Project, Beloit, Wisconsin* (DOE/EA-1861). The Final EA is hereby incorporated by reference.

DOE prepared this FONSI in accordance with NEPA, the Council on Environmental Quality regulations for implementing NEPA, as amended (40 CFR 1500 to 1508), and DOE NEPA regulations (10 CFR Part 1021).

ENVIRONMENTAL IMPACTS: The Final EA examined the potential environmental impacts of the Proposed Action and the No-Action Alternative. Under the No-Action Alternative, DOE would not authorize the use of SEP funds for the biomass boiler project. For the purpose of the

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EA, DOE assumes for the No-Action Alternative that Frito-Lay would not proceed without SEP funding. This approach provides a basis of comparison for the potential impacts of the proposed project.

Frito-Lay proposes to construct a boilerhouse and purchase and operate a wood-fired high-pressure biomass boiler [with a maximum heat output of about 34 million British thermal units (Btu) per hour] using SEP funding at the Frito-Lay manufacturing plant in Beloit, Rock County, Wisconsin. The project would also include installation of a high-pressure steam line from the boilerhouse to the plant and three process steam heat exchangers in the plant. The Frito-Lay plant is a full-service manufacturing and distribution center that primarily serves the region from Chicago, Illinois, to Minneapolis-St. Paul, Minnesota. The proposed project would convert the plant to a high-pressure steam platform and create the ability to use steam heat exchangers on three corn-processing lines rather than the existing system of two gas-fired boilers and three gas-fired process heat exchangers. The project would result in a reduction in natural gas use at the plant and have a total cost of about \$6 million.

Based on this and other information, DOE concluded that the design, permitting, construction, and operation of the biomass boiler project would have no measurable impacts to the following resources: geology and soils; land use; water resources; biological resources including threatened and endangered species; waste and hazardous materials; utilities, energy, and materials; and occupational health and safety. Therefore, those resource areas were not carried forward for further analysis in the EA (Section 3.2.1 of the EA).

DOE considered the following resources in more detail as part of the analysis: air quality, transportation, noise, aesthetics and visual resources, historic and cultural resources, socioeconomics, and environmental justice in more detail.

With regard to air quality, the proposed wood boiler would increase emissions of particulate matter, nitrogen oxide, carbon monoxide, and volatile organic compounds but would decrease emissions of sulfur dioxide. However, all emissions would be within permitted levels. Increased truck traffic for the delivery of fuel in the form of wood chips would result in a corresponding increase in heavy truck air emissions, but these would be negligible when placed in context of the traffic baseline. Because the wood chip boiler would displace energy currently being supplied via fossil fuels, there would be an expected reduction in regional greenhouse gas emissions. An electrostatic precipitator would filter the combustion gases and collect particulate matter such as ash from the burned wood pellets before venting the gases through the chimneystack. The ash would be collected in a rollout container dumpster and hauled off the site a couple times per year and disposed of at an approved landfill. Therefore, DOE concludes that the project will have minimal impacts on air quality.

With regard to transportation, the operation of the wood chip boiler would require three new full-time employees, and three to four combination trucks would deliver wood chips to the boilerhouse Monday through Friday. This would add about 14 vehicles per day to the traffic volume on Cranston Road or from 0.08 to 0.13 percent. The addition of as many as five vehicles (two trucks and three employees) passing through the intersection of Cranston and Milwaukee roads would represent only 0.4 percent of the peak-hour traffic of 1,252 vehicles per day.

(Section 3.2.2.2.2). This small increase in traffic volume on Cranston Road and other nearby roads would not be likely to affect the level of service. Therefore, DOE concludes that the boiler operations will have minimal impacts on local transportation.

With regard to noise, during operations, noise-generating equipment would include the wood chip feed system that would transfer the chips to the boiler, the trucks that would deliver the fuel chips, and blowers associated with the boiler. The new boiler would be in a new steel building. The analysis in this section does not account for sound dampening attributed to the building. At the nearest residential receptor 3,000 feet away, assuming simple geometric attenuation of 6 decibels (dB) per doubling of distance, the estimated sound level of the biomass boiler would be 43 A-weighted decibels (dBA). However, the estimated noise level at the same receptor for the existing air blower is 52 dBA. In addition, previously measured ambient noise levels at the Spring Brook Village are about 60 dBA because of its proximity to Interstate Highway 39/90. Given the ambient noise levels and the noise from the existing air blower, DOE concludes that the impact of the noise from the boilerhouse would be minimal.

With regard to aesthetics and visual impacts, the proposed project would not alter the industrial character of the area. Therefore, DOE concludes that the project will have minimal visual impacts (Section 3.2.2.4).

With regard to historic and cultural resources, the Wisconsin State Historic Preservation Office (SHPO) concurred with DOE's determination that there are no archeological or architectural properties in the area of potential effect of the proposed undertaking that are listed in the *National Register of Historic Places* and that the SHPO is not aware of any properties in the area that are eligible for listing. Therefore, DOE concludes that operations from the new facility will have no adverse impacts on cultural or historic resources.

With regard to socioeconomics, the operation of the new biomass boiler would create three direct jobs. However, the workers who constructed the boilerhouse and installed the boiler and other equipment could fill these positions, hence transitioning the construction positions from short-term temporary positions to permanent full-time operations jobs. Therefore, these three jobs would not create new indirect positions. The operation of the boiler, with the inherent reduction in the dependency on fossil fuels, the associated cost savings, and the increased competitive advantage to the recipient from the cost savings, could help to preserve jobs or community resources. The likely supplier of the wood chips is about 3 miles away in Beloit. Because there would be no project-related change to employment (assuming the three construction workers transitioned to operations), there would be no project-related change to the regional population or to the number of jobs. Therefore, DOE concludes that impacts to demographic changes and adverse impacts to the current level of public services and community infrastructure are unlikely.

With regard to environmental justice, there would be no high and adverse impacts from the proposed project to any segment of the population. Therefore, DOE concludes that the project will not result in high and adverse impacts, disproportionately affecting low-income or minority populations.

PUBLIC PARTICIPATION IN THE EA PROCESS: In accordance with applicable regulations and policies, DOE sent a Notice of Scoping on March 8, 2011, to Federal, State, and local agencies, tribal governments, and elected officials providing 15 days to comment on the scope of the EA. DOE published the scoping letter on the DOE Golden Field Office Reading Room website. DOE also publicized the availability of the scoping letter in *The Daily News* of Beloit on March 12, 14, and 15. DOE received one response to the scoping letter. In a March 25, 2011, letter, Andrew Janke, the Director of Economic Development for the City of Beloit, expressed support for the project. DOE sent consultation letters to the U.S. Fish and Wildlife Service (FWS) and the Wisconsin SHPO. The FWS concurred with DOE's conclusion that the proposed project would not affect any Federally listed threatened or endangered species. The Wisconsin SHPO responded with a determination of no historic properties affected. The Final EA contains copies of these letters. DOE addressed all of the scoping comments in the Draft EA.

In addition, DOE sent letters on March 8 to the following American Indian tribes with potential interests in the area to inform them of the project and request comments: Potawatomi Nation of Oklahoma, Flandreau Santee Sioux Tribe of South Dakota, Lower Sioux Indian Community of Minnesota, Forest County Potawatomi Community of Wisconsin, Hannahville Indian Community, Ho-Chunk Nation, Prairie Band of Potawatomi Nation of Kansas, Prairie Island Indian Community of Minnesota, Santee Sioux Nation of Nebraska, Sisseton-Wahpeton Oyate of the Lake Traverse Reservation, Spirit Lake Tribe, Upper Sioux Community of Minnesota, and the Winnebago Tribe of Nebraska.

DOE published the Draft EA on the DOE Golden Field Office Public Reading Room website on May 20, 2011. DOE sent a Notice of Availability to announce the availability of the Draft EA to identified stakeholders and published a notice of availability in *The Daily News* of Beloit. The public comment period began May 20 and ended June 3, 2011. DOE received no comments on the Draft EA.

DETERMINATION: Based on the information in the Final EA (DOE/EA-1861), DOE determined that the Proposed Action would not constitute a major Federal action significantly affecting the quality of the human environment in the context of NEPA. Therefore, preparation of an environmental impact statement is not required, and DOE is issuing this FONSI.

The State of Wisconsin must ensure its subrecipient, Frito Lay, complies with the appropriate regulatory and permitting requirements, and implements the best management practices and other committed-to measures that are identified in the EA or this FONSI. Specifically, State of Wisconsin through Frito-Lay has committed to obtain and comply with all Federal, State, and local permits and applicable regulations for the construction and operation of the biomass boiler. Also, as noted in the Final EA, State of Wisconsin through Frito-Lay has committed to certain best management practices to avoid or minimize potential impacts (Section 2.2.2). These commitments shall be incorporated and enforceable through DOE's funding award documents to the State of Wisconsin through the Wisconsin OEI.

The Final EA is available on the DOE Golden Field Office Reading Room website at http://eere.energy.gov/golden/Reading_Room.aspx and the DOE NEPA website at http://nepa.energy.gov/DOE_NEPA_documents.htm.

For questions about this FONSI, contact:

Melissa Rossiter
U.S. Department of Energy
Golden Field Office
1617 Cole Boulevard
Golden, Colorado 80401
melissa.rossiter@go.doe.gov

For further information about the DOE NEPA process, contact:

Office of NEPA Policy and Assistance
U.S. Department of Energy
1000 Independence Avenue, S.W.
Washington, D.C. 20585
(202) 685-4600 or (800) 472-2756

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Carol Battershell
Golden Field Office Manager